☑012/026

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (original): A communications method for use in a
2 communications system including a mobile node, a second
3 node including a mobility agent module, and an application
4 agent for performing application processing on packets
5 originally directed to said mobile node, the method
6 comprising:
7   operating said mobility agent module in said second
8 node to receive packets with a destination address
9 corresponding to said mobile node;
10   operating said mobility agent module to redirect at
11 least some of the received packets with a destination
12 address corresponding to said mobile node to said
13 application agent instead of said mobile node;
14   operating the application agent to process application
15 data in the payload of multiple redirected packets, said
16 processing resulting in at least one application event,
17 said resulting application event being a function of the
18 processing of the payload content of multiple redirected
19 packets; and
20   determining, as a function of said resulting
21 application event and paging trigger event information
22 whether said mobile node should be paged.

1 Claim 2 (currently amended): The method of claim 1,
2 wherein said application agent performs said determining
3 step, the method further comprising:
4   operating said application agent to receive
5 information indicating at least one paging trigger event,
6 said information being received from one of i) said mobile
7 node; and an access router which serves as said mobile

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8   node's point of network attachment; and <u>iii)</u> a paging
9   policy server included in said communications system~; and
10   <u>wherein</u> said at least one paging trigger event <u>is</u>
11 being an application processing result.

1   Claim 3 (original): The method of claim 2, wherein said
2   application processing result is completion of a file
3   download by a communications application, said downloaded
4   file including multiple packets.

1   Claim 4 (original): The method of claim 3, further
2   comprising:
3   operating said mobile node to initiate said file
4   download prior to said redirection of packets to said
5   application agent;
6   operating said application agent to initiate a page to
7   said mobile node in response to determining as a function
8   of said resulting application event that said mobile node
9   should be paged; and
10   operating said application agent to communicate at
11 least a portion of said downloaded file to said mobile
12 node.

1   Claim 5 (original): The method of claim 2, wherein said
2   application processing result is completion of decoding of
3   a download file including multiple encoded packets.

1   Claim 6 (original): The method of claim 2, wherein said
2   application processing result is completion of a
3   computation involving the processing of numbers included in
4   the payload of multiple redirected packets.

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1 Claim 7 (original): The method of claim 6, wherein said
2 application agent includes a spreadsheet application for
3 performing said computation.

1 Claim 8 (original): The communications method of claim 1,
2 wherein determining whether said mobile node should be
3 paged includes:
4   comparing said at least one resulting application
5 event to stored application event information indicating at
6 least one application result that is to trigger paging of
7 said mobile node.

1 Claim 9 (original): The communications method of claim 8,
2 further comprising:
3   in response to determining, said mobile node should be
4 paged,
5   i) initiating paging of said mobile node; and
6   ii) transmitting a signal to halt the
7   redirection of at least some packets with a
8   destination address corresponding to said mobile
9   node so that said packets are directed to said
10   mobile node.

1 Claim 10 (original): The method of claim 8, wherein said
2 second node includes packet flow filtering information,
3 said packet flow filtering information identifying at least
4 a first type of packet and a second type of packet, the
5 first and second types of packets being different, the
6 method further comprising:
7   operating said mobility agent in said second node to
8 filter received packets with a destination address
9 corresponding to said mobile node to distinguish between
10 received packets of the first type and received packets of
11 the second type, received packets of the first type

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12 corresponding to a first packet flow, received packets of
13 the second type corresponding to a second packet flow, said
14 mobility agent redirecting packets corresponding to the
15 second packet flow to said application agent without
16 redirecting said first packet flow.

1 Claim 11 (original): The method of claim 10, further
2 comprising:
3   comparing information in a packet of the first type to
4 first paging event trigger information; and
5   paging said mobile node when information in said
6 packet of the first type matches paging trigger information
7 included in said first paging event trigger information.

1 Claim 12 (original): The method of claim 10, further
2 comprising:
3   operating said mobility agent to receive said
4 filtering information from the application agent, said
5 application agent generating said filtering information
6 from information received from one of said mobile node and
7 an access node which serves as a point of network
8 attachment for said mobile node.

1 Claim 13 (original): The method of claim 10,
2   wherein said application agent is an application proxy
3 which operates as a proxy for a corresponding application
4 executed on said mobile node; and
5   wherein packets of the first type correspond to a
6 first application being executed by said mobile node while
7 packets of the second type correspond to a second
8 application which is being executed by said application
9 agent.

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1 Claim 14 (original): The method of claim 10, further
2 comprising:
3   operating the mobility agent to direct packets of the
4 first type having an address corresponding to said mobile
5 node to said mobile node while directing packets of the
6 second type to said application agent.

1 Claim 15 (original): The method of claim 10, further
2 comprising the step of:
3   operating said mobility agent to initiate paging of
4 said mobile node when said mobile node is in a sleep state
5 and a packet of the first type having an address
6 corresponding to said mobile node is received by said
7 mobility agent.

1 Claim 16 (original): The method of claim 10, wherein said
2 mobility agent pages said mobile node in response to a
3 paging message received from said application agent.

1 Claim 17 (original): The method of claim 1, wherein the
2 second node is one of a Mobile IP Home Agent node, a Mobile
3 IP Regional node, a Mobile IP Foreign Agent node, and a
4 Mobile IP Attendant.

1 Claim 18 (original): The method of claim 1, wherein the
2 application agent is located in the second node with the
3 mobility agent.

1 Claim 19 (original): The method of claim 1, further
2 comprising a fourth node coupled to said second node, said
3 fourth node including said application agent.

1 Claim 20 (original): The method of claim 1, further
2 comprising:

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3   operating said application agent to transmit a first
4   paging message to said mobility agent module when it is
5   determined that said mobile node should be paged;
6   operating the mobility agent module to receive said
7   first paging message; and
8   operating the second node to transmit, in response to
9   said mobility agent receiving said first paging message, a
10 paging message to said mobile node.

1   Claim 21 (original): The method of claim 1, further
2   comprising:
3   operating the mobile node to send a routing message to
4   the mobility agent, said message including said at least
5   some information.

1   Claim 22 (original): The communications method of claim 1,
2   wherein the application agent is in one of the second node
3   and a fourth node, the fourth node being coupled to said
4   second node.

1   Claim 23 (original): A communications system comprising:
2   a mobile node including an application for processing
3   packets directed to said mobile node;
4   an application agent including a mobile node proxy
5   application and a set of application result processing
6   trigger information;
7   a mobility agent module including means for receiving
8   packets with a destination address corresponding to said
9   mobile node and redirecting at least some of the received
10 packets with a destination address corresponding to said
11 mobile node to said application agent instead of said
12 mobile node; and
13   said mobile node proxy application in said application
14 agent processing data in the payload of multiple redirected

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15 packets, said processing resulting in at least one

16 application event; said application agent further including

17 means for determining, as a function of said resulting

18 application event and paging trigger event information

19 whether said mobile node should be paged.

1 Claim 24 (currently amended): The communications system of

2 claim 23, wherein said mobile node proxy further includes:

3 means response to determining that said mobile node

4 should be paged for initiating paging of said mobile node;

5 and

6 means for transmitting a signal to halt the

7 redirection of at least some packets with a destination

8 address corresponding to said mobile node, after initiating

9 paging of said mobile node, so that said packets are

10 directed to said mobile node.

1 Claim 25 (original): A communications method for use in a

2 communications system including a mobile node, a second

3 node including a mobility agent module, and an application

4 agent for performing application processing on packets

5 originally directed to said mobile node, the method

6 comprising:

7 operating said mobility agent module in said second

8 node to receive packets with a destination address

9 corresponding to said mobile node;

10 operating said mobility agent module to redirect at

11 least some of the received packets with a destination

12 address corresponding to said mobile node to said

13 application agent instead of said mobile node;

14 operating the application agent to process application

15 data in the payload of at least one of said redirected

16 application packets, said processing resulting in at least

17 one application event; and

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18   determining, as a function of said application event
19 resulting from processing of said application data, and at
20 least some paging trigger event information provided by
21 said mobile node, whether said mobile node should be paged.

1 Claim 26 (original): The communications method of claim
2 25, wherein determining whether said mobile node should be
3 paged includes:
4   comparing said at least one resulting application
5 event to stored application event information indicating at
6 least one application result that is to trigger paging of
7 said mobile node.

1 Claim 27 (original): The communications method of claim
2 26, further comprising:
3   in response to determining, said mobile node should be
4 paged,
5   i)   initiating paging of said mobile node; and
6   ii) transmitting a signal to halt the redirection of
7 at least some packets with a destination address
8 corresponding to said mobile node so that said packets are
9 directed to said mobile node.

1 Claim 28 (new): A network node for use in a communications
2 system which includes a mobile node, the network node
3 comprising:
4   an application module for performing application
5 processing on packets originally directed to said mobile
6 node;
7   a mobility agent module for receiving packets with a
8 destination address corresponding to said mobile node and
9 for redirecting at least some of the received packets with
10 a destination address corresponding to said mobile node to
11 said application agent instead of said mobile node;

10

12   wherein said application module processes application

13   data in the payload of multiple redirected packets, said

14   processing resulting in at least one application event,

15   said resulting application event being a function of the

16   processing of the payload content of multiple redirected

17   packets; and

18   a paging determination module for determining, as a

19   function of said resulting application event and paging

20   trigger event information whether said mobile node should

21   be paged.

1   Claim 29 (new):   The network node of claim 28, further

2   comprising:

3   means for receiving information indicating at least

4   one paging trigger event, said information being received

5   from one of i) said mobile node;   an access router which

6   serves as said mobile node's point of network attachment;

7   and iii) a paging policy server included in said

8   communications system;

1   Claim 30 (new) The network node of claim 28, wherein said

2   at least one paging trigger event is an application

3   processing result.

1   Claim 31 (new):   A network node for use in a communications

2   system which includes a mobile node, the network node

3   comprising:

4   application processing means for performing

5   application processing on packets originally directed to

6   said mobile node;

7   mobility agent means for receiving packets with a

8   destination address corresponding to said mobile node and

9   for redirecting at least some of the received packets with

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10 a destination address corresponding to said mobile node to
11 said application agent instead of said mobile node;
12   wherein said application processing means processes
13 application data in the payload of multiple redirected
14 packets, said processing resulting in at least one
15 application event, said resulting application event being a
16 function of the processing of the payload content of
17 multiple redirected packets; and
18   paging determination means for determining, as a
19 function of said resulting application event and paging
20 trigger event information whether said mobile node should
21 be paged.

1 Claim 32 (new): The network node of claim 31, further
2 comprising:
3 means for receiving information indicating at least one
4 paging trigger event, said information being received from
5 one of i) said mobile node; an access router which serves
6 as said mobile node's point of network attachment; and iii)
7 a paging policy server included in said communications
8 system.

1 Claim 33 (new) The network node of claim 31, wherein said
2 at least one paging trigger event is an application
3 processing result.

1 Claim 34 (new):   A network node for use in a
2 communications network, said communications network also
3 including a mobile node, said network node comprising:
4   a processor configured to:
5   receive packets with a destination address
6 corresponding to said mobile node;
7   redirect at least some of the received packets with a
8 destination address corresponding to said mobile node to an

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9　application agent controlled by said processor instead of
10　to said mobile node;
11　　　control the application agent to process application
12　data in the payload of multiple redirected packets, said
13　processing resulting in at least one application event,
14　said resulting application event being a function of the
15　processing of the payload content of multiple redirected
16　packets; and
17　　　determine, as a function of said resulting application
18　event and paging trigger event information whether said
19　mobile node should be paged.

1　Claim 35 (new) The network node of claim 34, wherein said
2　at least one paging trigger event is an application
3　processing result.

1　Claim 36 (new):　　　A computer readable medium embodying
2　machine executable instructions for controlling a network
3　node in a communications network to implement a
4　communications method, the communications network also
5　including a mobile node,　the communications method
6　comprising:
7　　　receiving packets with a destination address
8　corresponding to said mobile node;
9　　　redirecting at least some of the received packets with
10　a destination address corresponding to said mobile node to
11　an application agent controlled by said processor instead
12　of to said mobile node;
13　　　processing application data in the payload of multiple
14　redirected packets, said processing resulting in at least
15　one application event, said resulting application event
16　being a function of the processing of the payload content
17　of multiple redirected packets; and

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18   determining, as a function of said resulting
19 application event and paging trigger event information
20 whether said mobile node should be paged.

1 Claim 37 (new):The machine readable medium of claim 36,
2 wherein said at least one paging trigger event is an
3 application processing result.

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